

WAFER-LEVEL HERMETIC MICRO-DEVICE PACKAGES**ABSTRACT OF THE DISCLOSURE**

[0238] A method for manufacturing a hermetically sealed micro-device package encapsulating a micro-device. The package includes a transparent window allowing light to pass into and out of a cavity containing the micro-device. A first frame-attachment area is prepared on semiconductor substrate having a micro-device operably disposed thereupon, the first frame-attachment area having a plan that circumscribes the micro-device. A second frame-attachment area is prepared on a sheet of transparent material, the second frame-attachment area having a plan that circumscribes a window aperture portion of the sheet. A frame/spacer is positioned between the semiconductor substrate and the sheet, the frame/spacer including a continuous sidewall having a plan on one side substantially corresponding to, and substantially in register with, the plan of the first frame-attachment area, having a plan on the opposite side substantially corresponding to, and substantially in register with, the plan of the second frame-attachment area, and having a height that exceeds the height of the micro-device. Next the substrate, frame/spacer and window are bonded together to form a hermetically sealed package encapsulating the micro-device in a cavity below the window aperture portion of the transparent sheet.